Amendments to the Claims:

1. (original) A scalable video format conversion system for utilizing various system resources to convert an interlaced video signal into a progressive video signal, the scalable video format conversion system comprising:

a scalable motion-adaptive de-interlacing system for converting the interlaced video signal into the progressive video signal according to a motion situation of an image area, the scalable motion-adaptive de-interlacing system comprising:

a variable-field motion detection apparatus for accessing a plurality of video fields to detect the motion situation of the image area, wherein the number of the plurality of accessed video fields is equal to a detection number, and the detection number is determined by a mode control signal; and

a mode control module for generating the mode control signal according to the availability of the various system resources and/or the status of the scalable video format conversion system.

2. (original) The scalable video format conversion system of claim 1, wherein the scalable motion-adaptive de-interlacing system comprises at least one motion detector, and at least one interpolator controlled by the motion detector.

3. (original) The scalable video format conversion system of claim 1, wherein the availability of the various system resources is dependent upon the available computational power, the available memory space, the available memory bandwidth, and/or the system power of the scalable video format conversion system.

4. (original) The scalable video format conversion system of claim 1, wherein the status of the scalable video format conversion system is dependent upon the bit rate of a

video bit-stream and/or an audio bit-stream.

5. (original) The scalable video format conversion system of claim 1, wherein the status of the scalable video format conversion system is dependent upon the data processing rate of a video decoder and/or an audio decoder.

6. (original) The scalable video format conversion system of claim 1, wherein the status of the scalable video format conversion system is dependent upon the data processing rate of a video encoder and/or an audio encoder.

7. (original) The scalable video format conversion system of claim 1, wherein the status of the scalable video format conversion system is dependent upon the workload of a decoder parser and/or an encoder parser.

8. (original) The scalable video format conversion system of claim 1, wherein the status of the scalable video format conversion system is dependent upon the display or decoding workload of a sub-picture controller.

9. (original) The scalable video format conversion system of claim 1, wherein the status of the scalable video format conversion system is dependent upon the display workload of an on-screen-display (OSD) controller.

10. (original) The scalable video format conversion system of claim 1, wherein the status of the scalable video format conversion system is dependent upon the memory bandwidth workload of a memory controller.

11. (original) The scalable video format conversion system of claim 1, wherein the status of the scalable video format conversion system is dependent upon a user-selectable

display mode, such as Letterbox, Pan-scan, NTSC-to-PAL conversion, PAL-to-NTSC conversion, Zoom in, or Zoom out.

12. (original) The scalable video format conversion system of claim 1, wherein the detection number ranges from 2 to 6.

13. (withdrawn) A variable-field motion detector having access to a plurality of video fields of an interlaced video signal for detecting a motion situation of an image area in the interlaced video signal, the variable-field motion detector comprising:

a plurality of pixel difference circuits, wherein each pixel difference circuit is for computing a detection value according to the difference between the pixel values of a single pixel in two different video fields;

a decision circuit coupled to the pixel difference circuits for determining the motion situation of the image area according to the detection values; and

a field-number adjuster, for adjusting the pixel difference circuits and/or the decision circuit to eliminate the effect of some video fields according to a detection number.

14. (withdrawn) The variable-field motion detector of claim 13, wherein each pixel difference circuit comprises:

a subtracter for computing the difference between the pixel values of a single pixel in two different video fields; and

an absolute circuit coupled to the subtracter for computing the absolute value of the output signal of the subtracter as the detection value.

15. (withdrawn) The variable-field motion detector of claim 13, wherein the decision circuit is for comparing each detection value with a related threshold to accordingly generate a boolean value, and then using the boolean values to compute the motion

situation of the image area.

16. (withdrawn) The variable-field motion detector of claim 15, wherein the field number adjuster is for setting some of the detection values to be smaller than the related thresholds according to the detection number.

17. (withdrawn) The variable-field motion detector of claim 15, wherein the field number adjuster is for setting some of the boolean values to be zero according to the detection number.

18. (withdrawn) The variable-field motion detector of claim 13, wherein the decision circuit is for generating a maximum detection value according to the detection values, and then comparing the maximum detection value with a threshold to determine the motion situation of the image area.

19. (withdrawn) The variable-field motion detector of claim 18, wherein the field number adjuster is for setting some of the detection values to be smaller than the threshold according to the detection number.

20. (withdrawn) The variable-field motion detector of claim 13, wherein the field number adjuster is for setting the two input values of some of the subtracters to be the same value according to the detection number.